සියලුම හිමිකම් ඇවිරිණි/ முழுப் பதிப்புரிமையுடையது / All Rights reserved

වයඹ පළාත් අධ්‍යාපන දෙපාර්තමේන්තුව
வடமேல் மாகாணக் கல்வித் திணைக்களம்
Provincial Department of Education - NWP

Grade 11 | **Second Term Test 2024** | **80 E I,II**

INFORMATION AND COMMUNICATION TECHNOLOGY - PAPER 1

INDEX NO..... **TIME – 1 HOURS**

Answer all the questions.

1) Which of the following is equivalent to 131_{10} ?
   (1) 76_8 (2) 47_{16}
   (3) 10000011_2 (4) 10110011_2
2) What is the lowest value among the following ?
   (1) 146_{10} (2) 50_{16}
   (3) 10110111_2 (4) 72_8
3) If the ASCII value of H is equal to 72_{10}, which of the following represents ASCII character M ?
   (1) 1001110_2 (2) 1001101_2
   (3) 1001010_2 (4) 1001000_2
4) Which answer represents the given numbers in descending order ?
   (1) $160_{10}, 10011001_2, 113_8, 1A_{16}$ (2) $10011001_2, 160_{10}, 113_8, 1A_{16}$
   (3) $1A_{16}, 113_8, 160_{10}, 10011001_2$ (4) $113_8, 1A_{16}, 10011001_2, 160_{10}$
5) Which of the following statement/s is/are correct regarding Data and Information ?
   A. Information should always be updated.
   B. Data and Information are important for decision making.
   C. Incomplete information gives improper decisions.
   (1) A and B only (2) A and C only
   (3) A only (4) B and C only
6) Which of the following can be used as both input and output ?
   (1) Touch Screen and Light Pen
   (2) Digital Camera and Joy Stick
   (3) Touch Screen and Digital Camera
   (4) Bar Code Reader and Touch Screen
7) In which answer is included the origin of Graphical User Interface (GUI) and Internet respectively ?
   (1) Third generation and Fourth generation
   (2) Third generation and Fifth generation
   (3) Fifth generation and Fourth generation
   (4) Fourth generation and Fifth generation
8) What is the answer which included only the volatile memories ?
   (1) Random Access Memory (RAM), Read Only Memory (ROM)
   (2) Cache Memory, Read Only Memory (ROM)
   (3) Registers, Random Access Memory (RAM)
   (4) Read Only Memory (ROM), Registers
9) Which machine is used to diagnose brain activities by using the electric impulses ?
   (1) Magnetic Resonance Imaging Machine (MRI)
   (2) Electro-encephalography (EEG)
   (3) Computerized Axial Tomography Machine (CAT)
   (4) Electro-cardiogram Machine (ECG)
10) Which answer is equivalent to 4TB ?
   (1) 2^{12}MB (2) 2^{22}KB (3) 2^{32}Byte (4) 2^{32}KB

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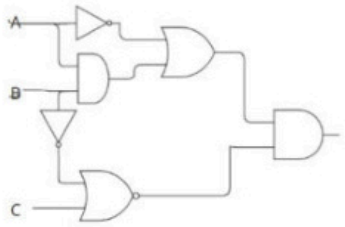
11) Consider the following logical circuit and select the correct expression.



(1) A'+ (A . B) . (B'+ C)'
(2) A . (A + B) + (B'. C)'
(3) A + (A + B) . (B'. C)
(4) A+ (A'+ B) + (B . C)'

12) A student is being selected for a course if he/she scores more than 75 in Mathematics (M) and more than 65 in Science (S) and more than 50 in English (E) or Computer Literacy (C).

Which of the following logical expression describes the above incident properly ?

(1) M<75 AND S>65 AND E>50 OR C>50
(2) M>75 AND S>65 AND E>50 OR C>50
(3) M>75 OR S>65 OR E>50 OR C>50
(4) M>75 AND S>65 AND E>50 AND C>50

13) Which is used as left indentation ?

(1) (2) (3) (4)

14) Which of the following statement/s is/are correct regarding the Operating System ?

A. Using NTFS file format is more effective than FAT 16 file format.
B. Memory Management process is used to allocate an enough memory for each process and to release that memory once the process ends.
C. WIMP components are used in Command Line Interfaces.

(1) A and C
(2) A and B
(3) B and C
(4) All A, B and C

15) What is the correct statement regarding the switch and the hub ?

(1) Switch is half duplex. Hub is full duplex.
(2) In a hub, data transmission occurs quickly. A switch operates slowly.
(3) Switch is full duplex. Hub is half duplex.
(4) The hub sends data to the relevant computer only, while switch cannot acts as the same.

16) What is the incorrect statement regarding the following shortcut keys ?

(1) Ctrl + A to select a complete document
(2) Ctrl + P to get a printed copy
(3) Ctrl + C to cut letters and objects
(4) Ctrl + V to paste letters and objects

17) The correct examples for Spreadsheet software are,

(1) Access , Excel , Libre office calc
(2) Base , My SQL , Excel
(3) Libre office calc , Oracle , Base
(4) Libre office calc , Excel , Numbers

18) What is the formula to be used to count the cells with values in cell range from B2 to C5 ?

(1) = count(B2:B5 + C5)

(2) = count(B2+C5)

(3) = count(B2:B5 ,C2:C5)

(4) = count(B2+C3 + B4;C5)

	A	B	C	D
1	Name	Marks 1	Marks 2	
2	Nimal	50	75	
3	Kamal	25	ab	
4	Sunil	35	60	
5	Mala	ab	25	
6				

19) What is the output value of 5*(15/3)+6*2^3-2 ?

(1) 124 (2) 49 (3) 59 (4) 71

20) Which is the correct cell address among the following ?

(1) AB$5$6 (2) A$B5
(3) AB5 (4) AB5

21) Consider the following statement/s regarding spreadsheet software.

A. Home key is used to move to column A, along to the row where the active cell is.
B. Ctrl+Home key is used to move to A1 cell.
C. Ctrl+ End is used to move to bottom right cell of the data range.

(1) A and B only (2) B and C only
(3) A and C only (4) All A, B and C

22) What is/are the correct statement/s regarding E-presentation software ?

A. It can make the presentation and the style by using Master pages.
B. It can manage the content of the slide by using Layouts.
C. It can change the way how transition from one slide to another by using Custom animation.

(1) A only (2) B only
(3) A and B only (4) All A,B and C

23) In e-presentation software, the correct shortcut key for inserting a new slide and the key used for navigating the previous slide during the presentation are,

(1) Ctrl+N , N (2) Ctrl+M , N
(3) Ctrl+N , P (4) Ctrl+M , P

24) Since the database tables are properly organized, the ……..... is increased. Since the data .....……can be minimized in a database, the data ……..... is maintained.

Which of the following answers correctly and sequentially fill in the blanks in the above statement ?

(1) Validity, Consistency, Efficiency
(2) Consistency, Redundency, Validity
(3) Accuracy, Consistency, Redundency
(4) Efficiency, Redundency, Consistency

25) What is meant by Data Encryption in Database ?

(1) Prorecting the database by using a password.
(2) Translating data in such a way that unauthorized person cannot read it.
(3) Translating data in such a way that unauthorized person can understand it.
(4) Protecting all data in the database by saving data in a very small space .

26) What is the special attribute/feature of a primary key ?

(1) It is used to identify a record of a table uniquely.
(2) The primary key should not be empty and no duplicate values.
(3) It is used to build a connection between two tables.
(4) The related data of foreign key field exist only.

27) Which of the following statement is correct regarding Programming Languages ?

(1) All high-level computer languages belong to the same Programming Paradigm.
(2) Programming Paradigm is a sequence of instructions which is designed to perform a certain task in problem solving.
(3) The Pascal Programming language, a low-level computer language, is close to the machine language.
(4) Some of the computer languages such as C, Basic should be translated to machine language before it runs.

28) Which task is not performed during design solution in the System Development Life Cycle ?

(1) Planning tests.
(2) Preparing written documents on aspects such as efficiency, benefits of the new system.
(3) Identifying the main hardware systems and its components.
(4) Designing infrastructure for user interfaces.

29) Which answer is included the correct combination regarding the internet protocols (A) and the uses of them (B) ?

A	B
a. ICMP	p. HTML file exchange
b. TCP /IP	q. File exchange
c. HTTP	r. Informing and controlling messages when there are errors
d. SMTP	s. Exchange of IP addresses
e. FTP	t. Electronic mail exchange

(1) a-q, b-p, c-s, d-t, e-r
(2) a-q, b-r, c-p, d-t, e-s
(3) a-r, b-s, c-p, d-t, e-q
(4) a-q, b-s, c-q, d-p, e-r

30) What is the most suitable statement about Pixels ?

(1) The number of bits per pixel determines by the resolution.
(2) It can be determined the numbers of colours in a pixel by observing a graphic.
(3) In changing the size of the original graphic, the size of the pixel and number of colours are changed.
(4) The colours used in a graphic are represented by the number of bits per pixel used.

31) Which answer includes only lossy compression file formats ?

(1) GIF,PNG,RAW
(2) JPEG,GIF,RAW
(3) RAW,BMP,TIFF
(4) TIFF,JPG,BMP

32) Choose the correctly matched answer according to the given labels for Cloud Computing services.

A	B
a. Infrastructure as a Service (IaaS)	x. The use of application software installed on server computers
b. Software as a Service (SaaS)	y. The facilities to store data on server computers
c. Platform as a Service (PaaS)	z. The facilities needed for software development and software execution

(1) a-x,b-y,c-z
(2) a-y,b-z,c-x
(3) a-y,b-x,c-z
(4) a-z,b-y,c-x

33) Which answer is included the outputs for the following pseudo codes respectively ?

```
X=0
  While x <= 5
    X = x + 2
  Endwhile
  Print x
```

```
X=0
  repeat
    X = x + 2
  Until x <= 5
  Print x
```

(1) 0 and 0
(2) 6 and 2
(3) 4 and 6
(4) 6 and 6

34) Which is the output of the pseudo code below ?

(1) 2 , 1
(2) 5 , 10
(3) 5 , 15
(4) 6 , 15

```
sum=0
num=0
for i = 1 to 5 do
   num = i + 1
   sum = sum + i
display num,sum
```

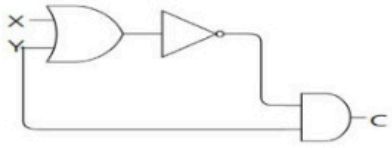
35) Which is the correct output for the given Pascal Program ?

```
Program showNum (input,output);
Var x : integer;
Begin
      X := 5;
      Repeat
         Writeln (X);
         X := X– 1;
      Until X = 3;
End.
```

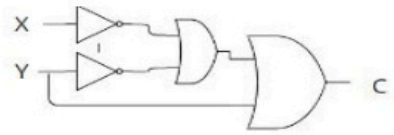
(1) 5 , 4
(2) 5
4
(3) 5 , 4, 3
(4) 5
4
3

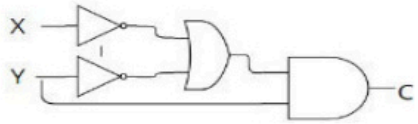
PAST PAPERS WIKI

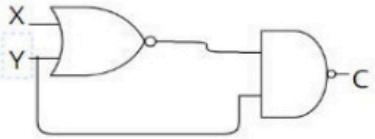
36) Consider the following logical circuit.

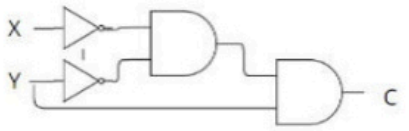


Which logical circuit is relevant to the above circuit ?

(1) 

(2) 

(3) 

(4) 

37) Which of the following answer is included only the file extensions of Word Processing software ?

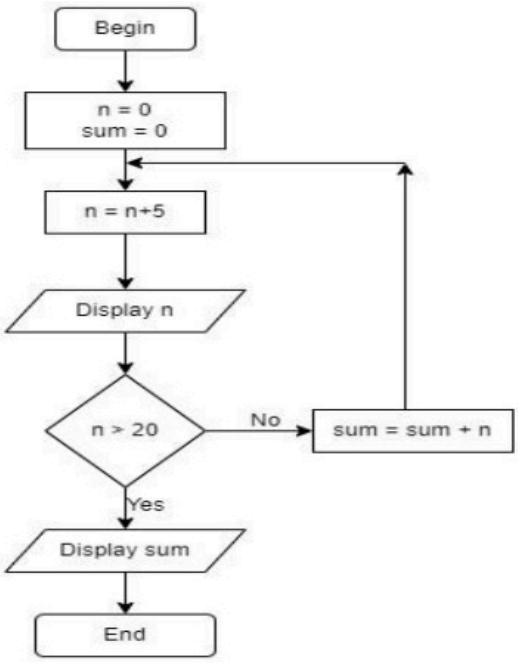
A. docx B. odt C. rft

(1) A and B only
(2) A and C only
(3) B and C only
(4) All A, B and C

- Use the following flow chart to answer the questions 38 and 39.

38) What is the output of this flow chart ?

(1) 5,10,15,20,25,50
(2) 0, 5,10,15,20,50
(3) 5,10,15,20,25,75
(4) 0,5,10,15,20,25



39) Which control structure is mentioned in this flow chart ?

(1) If-Then-Else-End If
(2) For-Do
(3) While-Do
(4) Repeat-until

40) Which of the following is a correct example of an Internet Protocol (IP) address ?

(1) 192.215.76.80.1
(2) 172.168.80.215
(3) 172.165.195
(4) 192.214.78.256

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வடமேல் மாகாணக் கல்வித் திணைக்களம்
Provincial Department of Education - NWP

Grade 11	Second Term Test 2024	80	E	I,II

INFORMATION AND COMMUNICATION TECHNOLOGY - PAPER 2

INDEX NO..... **TIME – 2 HOURS**

Answer only 5 questions including first question and any other four questions.
First question carries 20 marks and each of the other questions carries 10 marks.

(1) (i) Classify the following as either Data or Information.

a) The calendar for this year
b) The PIN number related to the electronic bank card
c) The student number you receive upon admission to the school
d) The average marks of the first-place student in the class

(ii) a) Write down the Least Significant Bit (LSB) and Most Significant Bit (MSB) of 11001.11_2.

b) Convert the $E2B_{16}$ into the Octal equivalent. Mention the steps.

(iii) Since the school does not have its own server, you use an online drive to store various data and information related to the school office. A regular desktop computer in the office is used for these tasks.

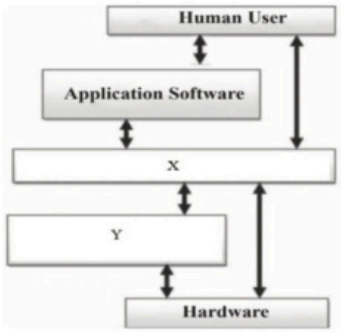
a) Specify one advantage and one disadvantage of using an online drive for storing data frequently used in office operations.
b) Name two currently available free online drive services for data storage.

(iv) Fill in the blanks by using the given word list.

- In computer data storage, the .....(a)..... method is used, and for representing memory addresses, the .....(b)..... method is used.
- For representing decimal digits from 0 to 9 only, the .....(c)..... coding scheme can be used, and the .....(d)..... method can represent 256 different characters.

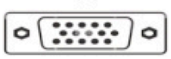
- (ASCII , EBCDIC , UNICODE , BCD , Decimal , Octal , Binary , Hexa-decimal)

(v) This diagram indicates the relationship between the user and the computer.



(a) Identify and name X and Y.
(b) Provide an example for each of X and Y.

(vi) Identify and name the following ports. Also, specify the devices that can be connected through each port.

(a)	(b)	(c)	(d)
			

(vii) Identify the functions of the following tools used in a graphic editing software and correctly label them accordingly.

a.	P. Blurring the graphic.
b.	Q. Dampening the graphic.
c.	R. Copying pixels from one part of a graphic to another.
d.	S. Resolving image irregularities removing unnecessary colours and spots.

(viii) Specify the appropriate data types for each field in the following data table, along with the field names separately.

Book_Id	Member_Id	Book_Price	No_of_Books
20151	C001	Rs.500	04
20152	S001	Rs.450	03
20153	E002	Rs.300	05

(ix) Write down whether the following statements are true or false.

a. When using a computer programme, incorrect punctuations and incorrect commands can lead to syntax errors.

b. In graphic editing software, tool is used to move Layers.

c. Translation of each statement written in a high-level computer language to machine language is done by the interpreter.

d. Iterative Incremental Model in System Development is used to complete one stage before going to the next phase.

(x) Draw the one-dimensional array related with the following Pascal Pragramme.

```
Program LearnArray(input,output);
Var X: array [ 0 .. 4 ] of integer;
Begin
   X [0] := 5;
   X [3] := 7;
   X [4] := X [0]  + X [3];
   X [2] := X [0]*2;
   X [1] := X [3];
```

(2)

(i) Fill in the blanks with the correct labels by using the given list.

a. Among the Internet Server computers, storing web pages and providing these to the Client computers are done by …….

b. The installation of software from Server computers to Client computers can be done through …….....

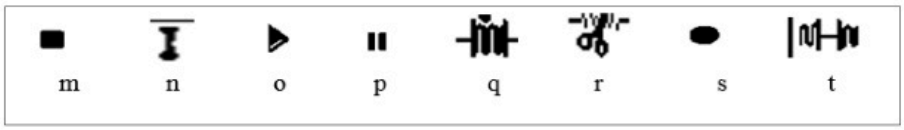
c. The operational activities on the Internet are carried out through ……..

d. For the top-level domain name of a uniform resource locator (URL) of a non-profitable organization's website, ……. can be used.

(Protocol, Non-Profitable Organization, Web Server, DNS Server, .org, .net, Remote Access, File Sharing)

(ii) The following are several functions of Audio Editing software. Write the correct tool for each using the given labels.

a. Selecting the necessary sections in the audio content.
b. Recording the required content.
c. Removing unnecessary sections.
d. Playing the content.



(iii) Write down whether the following statements are true or false.

a. In 2-D animation, the frames used at the beginning and at the end of motion are called as Key frames.
b. A file created by Giotto software is saved in the .xcf file format.
c. Some examples for the computer related Audio-Content editing software are, AVI Edit, Motion box, Photo Bucket.
d. In Windows Movie Maker, the video clips to be created, the image frames and the audio clips are arranged on Timeline stage.

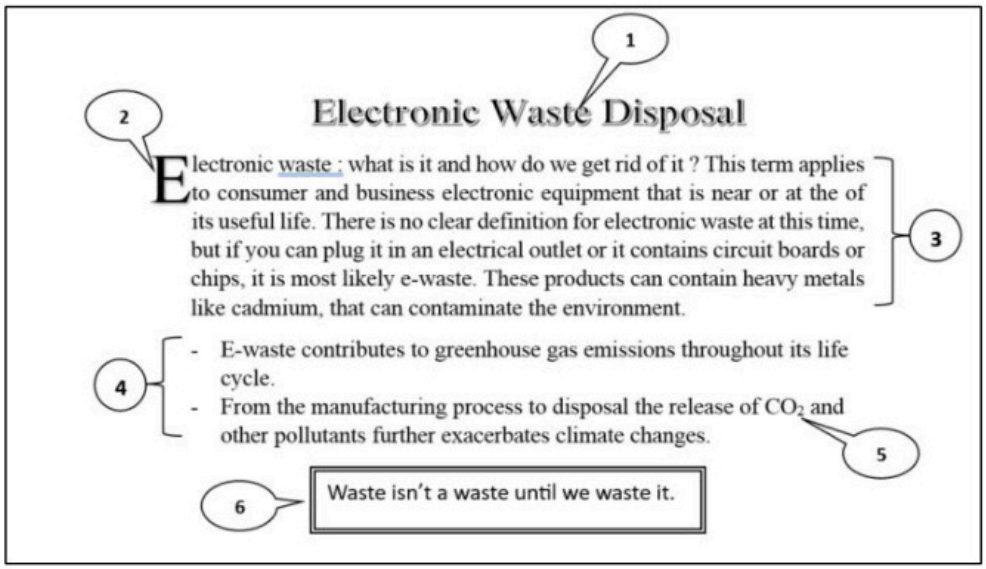
(3)

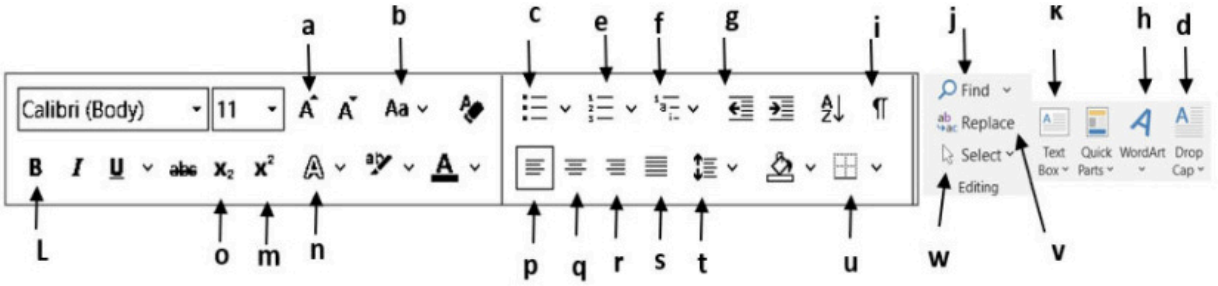
(i) "Suhasetha" is an organization that provides insurance services. Its branches are spread across the country, and the decision to establish a computer-based information system that integrates these branches was made by the head of the organization. Until now, the organization has been using a manual information system.
Answer the following questions related to the above system.

a. Mention two methods of gathering data to identify the requirements for designing the proposed computer-based information system.
b. Mention two problems that Suhasetha might face while dealing with a manual information system.
c. Mention two benefits of maintaining a computer-based information system to address the problems encountered while operating a manual information system.
d. During the testing of the system, some issues were identified by the system developer. List four methods for testing the system.
e. During the maintenance of the new system by Suhasetha, a need arose to establish online facilities for the payment of insurance premiums. Due to this requirement, it was decided that the system needs to be updated. At which stage of the system development life cycle can this be done?
f. Mention two changes that can be made to the developed system during that stage.

(4) (i) The following is a document prepared using Word Processing software.

a. Using the labels given from a to u, write down the correct tools used for the formattings from 1 to 6.


1
2
Electronic Waste Disposal
Electronic waste : what is it and how do we get rid of it ? This term applies to consumer and business electronic equipment that is near or at the of its useful life. There is no clear definition for electronic waste at this time, but if you can plug it in an electrical outlet or it contains circuit boards or chips, it is most likely e-waste. These products can contain heavy metals like cadmium, that can contaminate the environment.
3
4
- E-waste contributes to greenhouse gas emissions throughout its life cycle.
- From the manufacturing process to disposal the release of CO_2 and other pollutants further exacerbates climate changes.
5
6
Waste isn't a waste until we waste it.



b. Specify the correct tools that can be used to replace the word 'waste' with the word 'garbage' in every instance within this document.

c. Write down the steps to save this document on the desktop named 'ewaste'.

(ii) a. Specify separately a word processing software and a presentation software that can be installed on your school's desktop computer and are available for free in the internet.

b. Write the file formats related to the following files.

1. Microsoft Word file
2. Microsoft PowerPoint file
3. MS Excel file
4. MS Access file

(5) Below is the information regarding the salary payments for 25 employees of BRAND Garment Factory for the month of March. In addition to the basic salary, employees are given an extra allowance for each garment produced beyond the monthly target.

The monthly target for this factory is 230 garments (as shown in cell D3), and an additional allowance of Rs. 200.00 is paid for each extra garment produced (as shown in cell D4)

.

(i) Write the formula that should be entered in cell E6 to find the number of additional garments completed by Amila. (When this formula is copied to the range E6:E30, the corresponding values should be obtained in column E)

Past Papers Wiki

(ii) Write the formula that should entered in cell F6 to find the allowance Amila receives for the extra garments completed. (When this formula is copied to the range F6:F30, the relevant values should appear in column F.)

(iii) Write the formula to find Malithi's total salary in cell G9.

(iv) Write the formula in cell G31 to calculate the total salary payments required for the employees of BRAND Garment Factory.

	A	B	C	D	E	F	G
1	BRAND Company						
2	Salary details of March						
3	Target No. of garments			230			
4	Allowance for extra garment			200			
5	Salary No.	Name	Basic Salary	No. of completed garments within the month	No. of extra garments	Extra Allowance	Total Salary
6	EM001	Amila	Rs.35000.00	270			
7	EM002	Nimali	Rs.32000.00	240			
8	EM003	Sachithri	Rs.30000.00	250			
9	EM004	Malithi	Rs.29000.00	260			
10	EM005	Binuri	Rs.28000.00	255			
29	EM024	Kavindi	Rs.27000.00	230			
30	EM025	Nethuli	Rs.25000.00	265			
31		Total Salary					
32		Maximum Salary					
33		Minimum Salary					
34		Average of completed garments					

(v) In cell D34, write the formula to calculate the average garments completed within the month.

(vi) Write the maximum and the minimum salaries of the employees in cells D32 and D33 respectively.

(6) Below are the details of students, courses, and staff, and faculty members' information stored in the Vidulanka Educational Institution.

Course Table

Co_Id	Course	Co_Fees	Tea_Id	date_time
C011	Networking	Rs.40,000	Te001	Friday 2.00 pm
C012	MS Office	Rs.10,000	Te003	Tuesday 10.00 am
C013	Programming	Rs.30,000	Te004	Monday 4.00pm
C014	Graphics	Rs.20,000	Te002	Wednesday 8.00am

Teacher Table

Tea_Id	Tea_Name
Te001	Mrs. M.M. Perera
Te002	Mr. A.S.Fernando
Te003	Mr. A.P.Koliya
Te004	Mr. D.M. Asanka

Students Table

Stu_Num	Stu_Name	Age	Address
S00010	Amali	18	Negombo
S00011	Kasun	20	Dankotuwa
S00012	Bimal	19	Chilaw
S00013	Nethu	22	Marawila

Student Course Table

Stu_Num	Co_Id
S00010	C011
S00010	C012
S00011	C013
S00012	C012
S00012	C014

(i) Mention two primary keys with the table names in the above database.

(ii) Write a composite key with the table name.

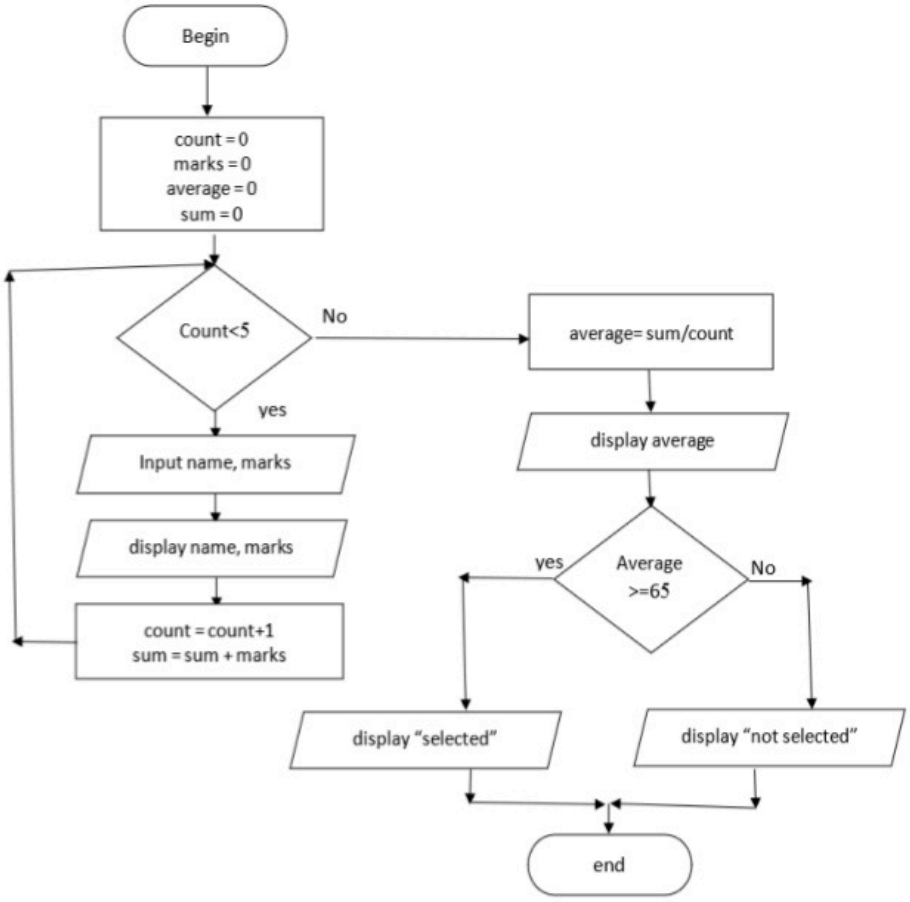
(iii) Mention two foreign keys with the name of the tables.

(iv) Mention the relationship between student table and course table.

(v) Mr. A. H. Mahesh has joined as a new teacher at Vidulaka Educational Institution, with a salary of Rs. 25,000.00 in the web design course. Mention the table/s which need to update to indicate the above scenario. (The course fee is Rs. 35,000, and classes are held every Sunday at 8:00 am)

(vi) Mention the records in the above updated table/s.

(7) (i) The few groups with five members are being selected for a competition. The members must score 65 or more average marks to get selected for the next round of the competition. The following is the flow chart for the selection process.



a. How many repetitions are there in this flow chart?
b. Write the output accordingly, if the following data is entered.
(Supun - 45, Aruna - 70, Dimuth - 78, Asith - 90, Lakshitha - 75)

(ii) The following is a simple Pascal programme to indicate the first 12 multiples of 7. Fill in the blanks with the suitable answers by using the given word list.

Word list - [real, 0, n, n+1, count, 7, 1, integer, >=11, < 12, <= 12, >=12]

```
program multiples_of_seven;
var n, count : .....①.....;
begin
      n:=.....②.....;
      count:=……③…….;
      while count……④……. do
      begin
         writeln(……⑤……) ;
         n:=n+7;
         count:=count+1;
      end;
readln;
end.
```

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